



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/525,095

07/20/2005

Jeremy Bowman

09294-020US1

3292

26161 7590 01/23/2008

FISH & RICHARDSON PC  
P.O. BOX 1022  
MINNEAPOLIS, MN 55440-1022

EXAMINER

WOOD, ELLEN S

ART UNIT

PAPER NUMBER

4174

MAIL DATE

DELIVERY MODE

01/23/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,095	<b>Applicant(s)</b> BOWMAN, JEREMY	
	<b>Examiner</b> ELLEN S. WOOD	<b>Art Unit</b> 4174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21, 24, 26 and 27 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21, 24, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/20/2005</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Objections*

1. Claim 26 is objected to because of the following informalities: The examiner believes that the word "*whilst*" should be corrected to the word "*while*". Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Jarvenkyla et al. (US 5,759,461, hereinafter "Jarvenkyla").

In regards to claim 1, Jarvenkyla discloses a multi-layer plastic pipe (col. 1 line 7). The multi-layer plastic pipe has a surface layer that provides a protective layer around a pipe (col. 2 lines 19-22). The protective outer layer is made to easily detach from the core pipe by simple means, either wholly or only at the joint surfaces, such as the pipe ends (col. 2 lines 26-29). The protective outer layer is formed from melt plastic (col. 2 lines 20-22). The outer layer may be crosslinked in order to improve the stiffness and strength and the resistance of the outer layer of the pipe (col. 2-3 lines 66-67 and 1). The outer layer may also have an adhesion enhancing or inhibiting agent mixed in with the material depending on the use and the materials selected for the outer layer

Art Unit: 4174

and core pipe (col. 3 line 49-55). The pipe formed is stiffer, stronger, and is protected against scratching (col. 1 lines 43-46).

In regards to claim 9, Jarvenkyla discloses that the outer layer is formed from melted plastics, thus containing polymeric materials (col. 2 lines 20-22). The outer layer may also have an adhesion enhancing or inhibiting agent mixed in with the material depending on the use and the materials selected for the outer layer and core pipe (col. 3 line 49-55).

In regards to claim 23, Jarvenkyla discloses a multi-layer plastic pipe (col. 1 line 7). The multi-layer plastic pipe has a surface layer that provides a protective layer around a pipe (col. 2 lines 19-22). The protective outer layer is made to easily detach from the core pipe by simple means, either wholly or only at the joint surfaces, such as the pipe ends (col. 2 lines 26-29). The protective outer layer is formed from melt plastic col. 2 lines 20-22). The outer layer may be crosslinked in order to improve the stiffness and strength and the resistance of the outer layer of the pipe (col. 2-3 lines 66-67 and 1). The outer layer may also have an adhesion enhancing or inhibiting agent mixed in with the material depending on the use and the materials selected for the outer layer and core pipe (col. 3 line 49-55). The pipe formed is stiffer, stronger, and is protected against scratching (col. 1 lines 43-46). The core pip is coated with a surface layer by coextrusion (col. 2 lines 19-20). Co-extrusion dies were used to form the plastic pipes (col. 2 lines 22-25). The surface of the outer layer is moderately hard, whereby it has a low adhesion, and the structure of the layer is moderately stiff, whereby the outer layer can be detached from the pipe (col. 2 lines 31-36), thus the outer layer prevents

undesired movement between the skin layer and the core, but the layer can still be removed and provide impact strength of the inner layer.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-22, 23-24 and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Jarvenkyla et al. (US 5,759,461, hereinafter "Jarvenkyla") in view of Toyosumi et al. (US 6,565,938, hereinafter "Toyosumi") in further view of Hayakawa et al. (6,825,280, hereinafter "Hayakawa").

Jarvenkyla discloses the plastic pipe as described above that has an inner and detachable outer layer. Jarvenkyla is silent with regards to the materials and characteristics of the pipes.

Toyosumi discloses a resin composition that has excellent barrier properties. The resin composition may be contain plasticizers (e.g. aliphatic polyhric alcohol) such as glycerol (col. 9 lines 34-35), lubricants such as saturate aliphatic amides (e.g. stearamide) and ethylene-bis-stearamide (col. 9 lines 24-27), and fatty acid esters (col. 9 line 41). The resin composition is has good gas barrier properties, solvent resistance and oil resistance (col. 1 lines 16-18). The resin composition of Toyosumi can be co-extruded with another resin composition (col. 10 lines 34-35). The resin composition is

Art Unit: 4174

preferably co-extruded with a polyolefin resin layer, such as a polyethylene resin layer (col. 12 lines 66-67). Toyosumi is silent with regards to whether a propylene block copolymer was used in the resin composition.

Hayakawa discloses a resin that uses propylene block copolymers to improve the rigidity, impact strength, resistance to deterioration, weathering resistance, and antistatic properties (col. 2 lines 46-51). The propylene block copolymer comprises 0.001 to 1 part by weight of fatty acid glycerol esters (col. 3 lines 20-23), thus the glycerol ester is within the range claimed by the instant applicant. Acid anhydrides are also combined in the propylene resin with the propylene block copolymer (col. 30 line 26-30 and 49). This increases the resins rigidity, heat resistance, and impact resistance (col. 31 lines 24-27).

It would be obvious to one of ordinary skill in the art at the time of the invention to add the resin materials of Hayakawa with the resin materials of Toyosumi. The resin composition of Toyosumi can be used to form containers that will contain products that have chemicals in which deteriorate the containers (col. 14 lines 23-29). The containers will also need to have increased impact strength during shipping and stacking. The combination of the propylene block copolymers with the resin composition of Toyosumi would be to produce a product that would have increased physical and mechanical properties. The amount that each component is present in the composition would be inherent to provide a composition that is optimal when the intended use of the resin composition is for protection and removable qualities when applied to a pipe. The mechanical characteristics of the layer would be inherent, because the composition is

essentially the same, thus the mechanical characteristics would be essentially the same. The burden has shifted to the applicant to provide evidence that this would not be the case. It would be obvious to one of ordinary skill in art to use the combined resin of Hayakawa and Toyosumi to form an outer skin layer of Jarvenkyla's pipes. The motivation would be to provide a resin layer that has improved physical and mechanical properties, which was the common task in Jarvenkyla, Toyosumi, and Hayakawa.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jarvenkyla et al. (US 5,759,461, hereinafter "Jarvenkyla") in view of Katz (US 6,127,662).

Jarvenkyla discloses the plastic pipe as described above that has an inner and detachable outer layer. The seaming of pipes is not possible without the outer layer removed first from the area to be seamed (col. 1 lines 63-66). The pipe ends must always be clean when they are seamed, whether by welding or by any other method (col. 1-2 lines 66-67 and 1). Jarvenkyla is silent in regards to the method of welding.

Katz disclose that electrofusion is a technique for joining two pipes together by means of sleeves having coils of electrical heater wire such that the two pipes are fused together (col. 1 lines 7-17). It would be obvious to one of ordinary to combine the plastic pipe of Jarvenkyla with the electrofusion method set forth in Katz to insure that the welding is always successful and that the welding machines operate as intended (col. 2 lines 2-4).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on Monday-Friday 7-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/  
Primary Examiner, Art Unit 4174

Ellen S Wood  
Examiner  
Art Unit 4174



Application/Control Number: 10/525,095  
Art Unit: 4174

Page 8